Program for the Fourth MSL Landing Site Workshop

Monday , September 27th 2010
Start First Day at 9:00 am

Introduction: (9:00 am)

John Grant (10 minutes)
Intro to Workshop and Process

Michael Meyer (10 minutes)
Welcome

Mike Watkins (15 minutes)
MSL Status Report

John Grotzinger (10 minutes)
MSL Science Objectives

Dawn Sumner (15 minutes)
Overview of MSL LSWG Activities

Habitability and Biosignatures (10:00 am)

Roger Summons (20 minutes)
Report from the Biosignature Taphonomy Working Group

Jen Eigenbrode (20 minutes)
Considerations for Habitability, Biosignatures, and their Preserved Records for Ancient Impact Terrains on Mars.

Dorothy Oehler (20 minutes)
Facies Prediction on Mars: Optimizing exploration for organic biosignatures

Lindsey Tierney and Bruce Jakosky (20 minutes)
The Biological Potential of Aqueous Environments on Mars

Discussion (20 minutes)
Led by Dave Des Marais

LUNCH (11:40 to 1:10 pm)

Setting the Stage – Mineralogy (1:10 pm)

Frank Seelos and Olivier Barnouin (20 minutes)
Generation and Evaluation of Systematic CRISM Mineral Indicator Maps

Selby Cull
CRISM Minerals Abundance Mapping (20 minutes)

Ray Arvidson
Orbital Reflectance Spectroscopy and Landed Ground Truth (20 minutes)

Ralph Milliken
Comparing and Contrasting the Mineralogy at the Final Four Candidate MSL sites (30 minutes)

Discussion (30 minutes)

Gale Crater (3:10 pm)

Ken Edgett (30 minutes)
The MSL Candidate Field Site at Gale Crater and its Context

Ryan Anderson (30 minutes)
Geomorphology of Gale Crater

Jim Bell (20 minutes)
Compositional and Mineralogical Interpretations at Gale Crater

Dawn Sumner (20 minutes)
The Sequence of Depositional and Erosional Events in Gale Mound Based on Stratigraphic Relationships

Discussion (45 minutes)

End of First Day at 5:35

Tuesday, September 28th 2010
Start Second Day at 8:30 am

Mawrth Vallis (8:30 am)

Joe Michalski , Jean-Pierre Bibring, Janice Bishop, Bethany Ehlmann, Damien Loizeau, Nancy McKeown, Nicolas Mangold, Jack Mustard, Eldar Noe Dobrea, Mario Parente, Francois Poulet, James Wray
Overview of the MSL Landing Site at Mawrth Vallis (10 minutes)

John Mustard, Eldar Noe Dobrea, and Jean-Pierre Bibring, Janice Bishop, Bethany Ehlmann, Damien Loizeau, Nancy McKeown, Nicolas Mangold, Joe Michalski, Mario Parente, Francois Poulet, James Wray
Geology of the MSL Landing Site at Mawrth Vallis (25 minutes)

Janice Bishop, Jean-Pierre Bibring, Bethany Ehlmann, Damien Loizeau, Nancy McKeown, Nicolas Mangold, Joe Michalski, Jack Mustard, Eldar Noe Dobrea, Mario Parente, Francois Poulet, James Wray
Mineralogy of the Landing Site and Surrounding Terrains (25 minutes)

Damien Loizeau, Jean-Pierre Bibring, Janice Bishop, Bethany Ehlmann, Nancy McKeown, Nicolas Mangold, Joe Michalski, Jack Mustard, Eldar Noe Dobrea, Mario Parente, Francois Poulet, James Wray
One Day, One Month, One Year at Mawrth Vallis (25 minutes)

Jean-Pierre Bibring, Janice Bishop, Bethany Ehlmann, Damien Loizeau, Nancy McKeown, Nicolas Mangold, Joe Michalski, Jack Mustard, Eldar Noe Dobrea, Mario Parente, Francois Poulet, James Wray
Conclusion: Mawrth Vallis is Unique in its Relevance for MSL Goals (10 minutes)

Dawn Sumner (25 minutes)
Mawrth Vallis: Physical Characteristics of Outcrops and Impact Brecciation of the Candidate MSL Landing Site

Discussion (45 minutes)

LUNCH (11:15 to 12:45 pm)

Holden Crater (12:45 pm)

Rossman Irwin (30 minutes)
An Overview of the Setting at Holden crater

Kelin Whipple (25 minutes)
Holden Fan Stratigraphy as a Record of Fluvial Processes on Ancient Mars (title provisional)

James Wray (20 minutes)
Holden Mineralogy (title provisional)

Debra Buczkowski and Kim Seelos (15 minutes)
Extensive Phyllosilicate Layer in Western Noachis Terra: Relationship to Phyllosilicates in Holden and Eberswalde

Peter Buhler (15 minutes)
Hydrological Context for Holden and Eberswalde Craters: A study of Erythraea Fossa

Discussion (45 minutes)

Eberswalde Crater (3:15 pm)

Jim Rice (20 minutes)
Science Investigations in the Ellipse and at Eberswalde delta

Melissa Rice (30 minutes)
Testable Hypotheses and Candidate Science Targets Within the Eberswalde Landing Ellipse

Sanjeev Gupta (20 minutes)
Eberswalde Photostratigraphy and Science Hypotheses

Kevin Lewis and Oded Aharonson (25 minutes)
Stratigraphic Architecture and Evolution of the Eberswalde Fluvial System: Testable Hypotheses from a Roving Mission

Discussion (45 minutes)

End Day 2 at 5:35 pm

Wednesday, September 29th 2010
Start Day 3 at 8:30 am

Characterization (8:30 am)

Mike Watkins (15 minutes)
Project Plans for Engineering Analysis of MSL Landing Sites

Ashwin Vasavada (25 minutes)
Atmosphere and Climate Context of the MSL Landing Sites

Randy Kirk et al. (30 minutes)
Meter-Scale Topography and Slopes of the MSL Landing Sites from HiRISE Stereogrammetry

Matt Golombek, Andres Huertas, and Devin Kipp (30 minutes)
Rocks at the MSL Landing Sites

Robin Fergason (30 minutes)
Surface Characteristics of the MSL Landing Sites from THEMIS-Derived Thermal Inertia and Predicted Temperature Images

M. Golombek, R. Kirk, A. Huertas, R. Fergason, R. Beyer, D. Kipp, T. Parker, E. Noe Dobrea, Y. Sun and H. Sladek (30 minutes)
Overview of MSL Landing Sites Surface Characteristics; Data Products for Engineering Analysis

Devin Kipp (30 minutes)
Entry, Descent, and Landing Engineering Safety Assessment Process

Paolo Bellutta and Matt Heverly (20 minutes)
MSL Landing Site Traversability Assessment

LUNCH (noon to 1:30 pm)

Discussion of the Final Four Sites (1:30 to 4:30 pm)

Meeting Adjourns (4:30 pm)

Poster Presentations (Posted All Three Days of the Workshop):

Rosalba Bonaccorsi, Chris McKay, Bin Chen, Timothy Shirley, and Lara Vimercati (5 minutes)
A High Fidelity Analog Study for Sources and Sinks of Clays and their Habitability Potential Under Arid-Semiarid (Noachian-Hesperian) Martian Conditions: The Ubehebe Volcanic Field (Death Valley, CA)

Rosalba Bonaccorsi, Chris McKay, Bin Chen, Timothy Shirley, and Lara Vimercati
Astrobiology of Clays: Habitability Potential and MicroRaman Detection of Biosignatures (LPS, ATP, and DNA) in Clay Minerals Analog for Mars Science Laboratory and ExoMars Missions

Noelle Bryan
HABITAT: Determining the Concentration, Nature, and Viability of Cells in the Atmosphere

Juan Carlos Echaurren
Estimation of Hydrothermal System on Landing Site: Eberswalde Crater, Mars

Shinji Karasawa
Evolution in Ecosystem of Bubbles

Alex Pavlov
Degradation of Organic Molecules by Ionizing Radiation in the Martian Subsurface

Miura Yasunori
Global and Local Characteristics of Martian Minerals with Carbonates or Hydroxyl Water for Future Martian Landing Sites.